DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-011458
Date Inspected: 16-Jan-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name:	Li Yang and Wu Zhi Cheng	**CWI Present:**	☑ Yes ☐ No
Inspected CWI report:	☐ Yes ☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes ☐ No ☐ N/A
Electrode to specification:	☑ Yes ☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes ☐ No ☐ N/A	**Verified Joint Fit-up:**	☑ Yes ☐ No ☐ N/A
Approved Drawings:	☑ Yes ☐ No ☐ N/A	**Approved WPS:**	☑ Yes ☐ No ☐ N/A
		Delayed / Cancelled:	☐ Yes ☑ No ☐ N/A

Bridge No: 34-0006
Component: OBG Trail Assembly

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector, S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

Segment 6AW (Lower Chevron)

This Quality Assurance (QA) Inspector witnessed final tension verification for Lower Chevron at Panel for Segment 6BW at following Locations as depicted below. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00234 Dated January 16, 2010.

At Panel Point 41 Lower Chevron South side.

At Panel Point 42 Lower Chevron South side.

At Panel Point 43 Lower Chevron (North and South) side.

Bolt sizes used were M22 x 70 RC Set# DHGM220020 and final torque required was 520 N-m. and

Bolt sizes used were M22 x 80 RC Set# DHGM220012 and final torque required was 427 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-675 and Hydraulic Torque wrench was been used with Model No. MP582-2 and Sr. No. PW090331001.

Signed Off Green Tag's

This Quality Assurance (QA) Inspector witnessed final tension verification for following depicted locations. Inspected 10% on a random basis and found the tension to be in general compliance and thus signed off the Green Tags.

At Segment 5AE, 5BE and 5CE at Panel Point (PP) 29 to PP 36.5 for Catwalk Support Bolt Size used was M16 x 40 RC Set# DHGM160019 and final torque required was 200 N-m respectively and Green Tag No. 541.

At Segment 5AE, 5BE and 5CE at Panel Point (PP) 29 to PP 36.5 for Catwalk Support Bolt Size used was M16 x 45 RC Set# DHGM160010 and final torque required was 200 N-m respectively and Green Tag No. 542.

At Segment 5AE, 5BE and 5CE at Panel Point (PP) 29 to PP 36.5 for Catwalk Support Bolt Size used was M16 x 50 RC Set# DHGM160011 and final torque required was 200 N-m respectively and Green Tag No. 543.

Cantilever (BK 001-24 3GK)

This QA Inspector observed ZPMC welding personnel performing repair welding by Flux Cored Arc Welding (FCAW) for Seal Plate of Cantilever as it was observed 15mm shorter than the drawing requirement. The welding is performed against the Welding Repair Report B-WR9899 Rev.0. The weld joints are identified as BK001-24-005, BK001-24-006 and BK001-24-007. The welder is identified as 066283. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-FCAW-1G (1F)-Repair. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

Segment 6CW

This QA Inspector observed ZPMC welding personnel performing welding by Flux Cored Arc Welding (FCAW) for Overhead Stiffeners at Hold back area for CB6 next to Segment 6CW FL3 location. The weld joints are identified as Seg 031J-032, Seg 031J-096, Seg 031J-041, Seg 031J-050. The welder is identified as 050316. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2233-Tc-U4b-F. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

Segment 6BW to 6CW

This QA Inspector observed ZPMC welding personnel performing welding by Shielded Metal Arc Welding (SMAW) for Edge Panel I-Ribs Counter Weight Side. The weld joints are identified as EP041-001-13 and EP041-001-14. The welder is identified as 066261. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2214-B-U2-FCM-1. It was observed that the

parameters noted down by ZPMC QC are in compliance with WPS.

Segment 5BW to 5CW

This QA Inspector observed ZPMC welding personnel performing repair welding by Shielded Metal Arc Welding (SMAW) for weld connecting Bottom Panel to Side Panel at W4 location. The welding is performed against the Welding Critical Repair Report B-CWR1074 Rev.0. The weld joints are identified as Seg.023A-005. The welder is identified as 037743. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-1G (1F)-FCM-1. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

Segment 6AE to 6BE

This QA Inspector observed ZPMC welding personnel performing repair welding by Shielded Metal Arc Welding (SMAW) for Transverse Splice weld at Side Panel Cross Beam side. The welding is performed against the Welding Repair Report B-WR9931 Rev.0. The weld joints are identified as OBE 6B-005. The welder is identified as 066179. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-3G (3F)-FCM-Repair-1. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

Segment 7BW

This QA Inspector observed ZPMC personnel at Segment 7BW at Panel Point (PP) 52 Transverse segment splice side panel cross beam side and deck panel excess base material been flame cut and mean while bevel preparation is in progress.

Segment 7AW

This QA Inspector observed ZPMC personnel at Segment at PP 49 T-Ribs hold back area at side panel cross beam and counter weight side and bottom panel grinding is in progress for surface preparation and for paint removal.

Segment 6BW

This QA Inspector observed ZPMC personnel at Segment 6BW at PP 43 Longitudinal Diaphragm cross beam side weld connection Floor beam grinding is in progress for flange and web.

Segment 6BW to 6CW

This QA Inspector observed ZPMC personnel at Segment 6BW to 6CW between PP 43 and PP 44 deck panel I-Rib hold back area visual discontinuities as marked by ZPMC CWI touch up welding is in progress.

Segment 7AE to 7BE

This QA Inspector observed ZPMC personnel at Segment 7AE to 7BE segment to segment fit-up for Deck Panel,

Bottom Panel and Side Panel (Cross Beam and Bike Path) side T-Ribs to T-Ribs Web welding is in progress.

Segment 6BE to 6CE

This QA Inspector observed ZPMC personnel at Segment 6BE to 6CE U-Rib to U-Rib splice plate installation is in progress.

Segment 5CE to 6AE

This QA Inspector observed ZPMC personnel at Segment 5CE to 6AE edge panel I-Rib hold back area Magnetic Particle Test by ZPMC QC is in progress.

Segment 6AW to 6BW (Heat Straightening)

This QA Inspector observed ZPMC personnel performing Heat Straightening for the Longitudinal Diaphragm for Segment 6AW to 6BW between PP 40 and PP41. Heat straightening been performed as they were misaligned. Heat Straightening been performed against the Heat Straightening Report (HSR) HSR1 (B)-7992 Rev.0 Dated Dec 11, 2009 for the following weld Joints.

Seg 029B-007~008
Seg 029C-038~039
Seg 027D-035~038
Seg 029F-035~038
LD009A-001~010
LD010A-001~010

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

No relevant conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Miller,Mark	QA Reviewer